

HiWi Job Offer: Documentation of Programming Code for Lidars

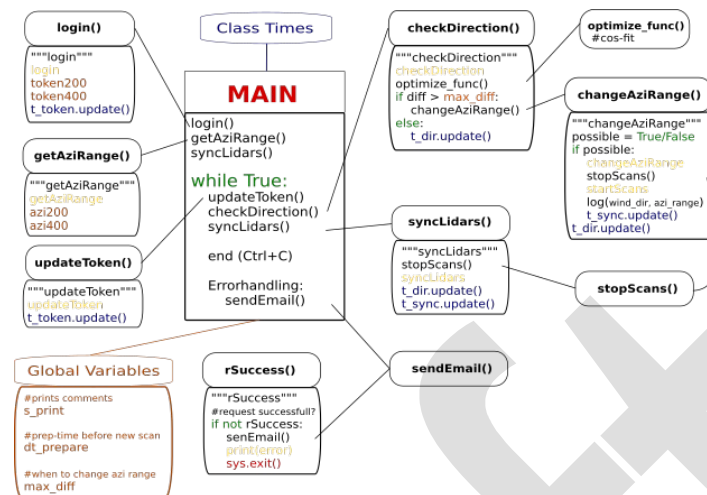


Fig 1: Overview of old API program.

In research, simulation and control of measurement devices as well as the analysis of their data is realized with the help of programming code. This code can become very complex. Thus, it is necessary to keep a good documentation and overview of its functionality.

Scope

The scope of this job is to develop a basic documentation of the program “WindCube API” used to control the Lidar measurements.

The documentation should consist of one graphical overview of all methods, functions and objects of the respective program. Further, each method should be represented with

- a short description
- the methods/functions calling the described method
- the methods/functions called by the described method
- the input parameters needed for this method
- the explicit and non-explicit output parameters obtained by the described method.

An interactive version written in HTML is desirable.

Throughout the job it will be tested whether this system is useful for a good documentation. If so, the job offer can be extended to documenting the following programs as well:

- LiXim (Lidar Simulator)
- Radar Simulator

Tasks

- Short literature research on Lidar measurement techniques
- Setting up graphical overview of all methods, functions and objects
- Setting up individual overviews for each method/function/object

Requirements

- enrollment in informatics, engineering, physics or similar
- Good knowledge of programming code (Python mandatory, MatLab, HTTP and preferably HTML)
- Experience with graphical design tools, e.g. Inkscape, is additionally helpful but not mandatory

Place	ForWind – Wind Energy Systems University of Oldenburg
Begin	April 2022
Duration	To be assigned
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